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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/186,247 11/04/98 BRIGHT

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EXAMINER

WU, J

ART UNIT

PAPER NUMBER

2623

5

DATE MAILED:

02/28/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/186,247

Applicant(s)
Bright et al.

Examiner
Jingge Wu

Group Art Unit
2623

☒ Responsive to communication(s) filed on Nov 4, 1998.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-84 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-84 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2623

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CAR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CAR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CAR 3.73(b).

2. Claims 1-6, 8-10, 15-23, 25-26, 46-47, and 59-61 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4-9, 12-20 of copending Application No. 09/158429 ('429). Although the conflicting

Art Unit: 2623

claims are not identical, they are not patentably distinct from each other because only difference between the present application and the '429 is that the claims of the present application are of the broader form than that of the claims of the '429. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the '429 into the present application in order to improve the computing speed since some operating steps are not employed.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 12-14, 27-45, 48-54, and 62-84 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-87 of copending Application No.09/158425 ('425). Although the conflicting claims are not identical, they are not patentably distinct from each other because only difference between the present application and the '425 is that the claims of the present application are of the broader form than that of the claims of the '425. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the '425 into the present application in order to improve the computing speed since some operating steps are not employed.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Art Unit: 2623

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1-3, 8-9, 15-16, 18-19, 21-22, 25, 46-49, 59-61 and 65-66 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6178205 to Cheung et al. ("Cheung").

As to claim 1, Cheung discloses a method for digitally processing transform data representing a phenomenon, the method comprising:

performing an inverse transform of said transform data to the real domain forming high-precision numbers (Fig. 1 element 110 col. 4 lines 55-56 and col. 7 note that all the real domain data include fraction parts) ; and
manipulating said high-precision numbers to produce an effect (Fig. 1 elements 120 and 130, note that the effect can be ghost-reduction etc.).

As to claims 2-3 and 16, Cheung further discloses a method as recited in claim 1, further comprising converting said high-precision numbers to integers and clipping the integers to an allowed range forming converted image (col. 10, lines 30-46).

Art Unit: 2623

As to claims 8 and 25, Cheung further discloses fraction parts (col. 7, table 2).

As to claims 9 and 22, Cheung further discloses IDCT(col. 4, lines 55-56).

As to claim 15, Cheung further discloses inverse quantization (Fig. 1 element 115).

As to claims 18-19, Cheung further discloses the coded data are image and video data (col. 2, lines 23-39).

As to claim 21, Cheung further discloses MPEG (col. 3, line 60).

As to claims 46-49, 59-61, 65-66 the claims 46-49, 59-61 and 65-66 are the corresponding system, article of manufacture, and program storage device claims to claims 1-3, and 15. The discussion are addressed with regard to claims 1, 3, and 15.

5. Claims 12, 26-29, 31-32, 36, 38, 45, 50- 51, 62, 67-68, and 70-72 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5544266 to Koppelmans et al. ("Koppelmans").

As to claim 12, Koppelmans discloses a method for digitally processing transform video data in the real domain representing a phenomenon, the method comprising:

performing an inverse transform of said transform data to the real domain forming high-precision numbers (Fig. 1 element 10); and

performing a forward transform of said high-precision numbers (Fig. 1 element 31).

As to claims 27 and 36, Koppelmans discloses a method for digitally processing transform-coded video data representing a phenomenon, the method comprising:

performing an inverse quantization of the transform-coded data forming transform data (Fig. 1 element 10);

Art Unit: 2623

performing an inverse transform of said transform data to the real domain forming high-precision numbers (Fig. 1 element 11);

performing a forward transform of said high-precision numbers forming forward transformed data (Fig. 1 element 31); and

performing a quantization of said forward transformed data forming contest data (fig. 1 element 32).

As to claim 28, Koppelmans further discloses entropy coding and decoding (Fig. 1 element 9 and 33).

As to claims 31-32, Koppelmans further discloses alternating steps for compression/decompression of o performing a forward transform, performing a quantization, entropy encoding, entropy decoding, performing an inverse quantization, and performing an inverse transform a desired number of times (Fig. 1).

As to claims 38, 45, 50- 51, 67-68, and 70-72, the claims 50-51, 67-68, and 70-72 are the corresponding system and program storage device claims to claims 27-28 ad 31-32. The discussions are addressed with regard to claims 27-28 and 31-32.

As to claim 62, the claim 62 is the corresponding computer program product claims to claim 12. The discussions are addressed with regard to claim 12.

As to claims 26, 29, 41, Koppelmans further discloses manipulating the numbers to produce an effect (Fig. 1 elements 12 and 14).

Art Unit: 2623

As to claims 42 and 44, Koppelmans further discloses the quantizer and inverse quantizer controlled by two unknown parameters (col. 7, lines 43-59, note that same or different quantization values could be obtained by setting the parameters).

Claim Rejections - 35 U.S.C. § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-7, 10-11, 17, 20, 23-24, 55-58, and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung.

As to claims 4-7, 10-11, 17, 20, 23-24, 55-58, and 84, Cheung does not explicitly mention the features of chroma-key merging, color correction, image rotation (90 degree), floating number, IDWT, IDFT, entropy decoding, JPEG, raster display monitor, spectral analysis, and audio data.

However, the examiner takes Official Notice that these features are notoriously well known in the art.

Art Unit: 2623

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include these features in the method of Cheung in order to improve the quality of the images.

8. Claims 13-14, 39-40, and 63-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koppelmans in view of US 5495292 to Zhang.

As to claims 13-14, 39-40, and 63-64, Koppelmans does not mention different transformations.

Zhang, in an analogous environment, discloses a DCT followed by IDWT (Fig. 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the scheme of Zhang in the method of Koppelmans in order to improve the quality of the images (Zhang, col. 1, line 17-col.2, line 23). Doing so would reduce the blocking effect and errors in the output image so that the quality of the method is improved.

9. Claims 30, 33-35, 37, 69, and 73-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koppelmans in view of Cheung.

As to claims 30, 69, Koppelmans does not explicitly disclose rounding and clipping.

Cheung, in an analogous environment, discloses the rounding and clipping after IDCT (col. 10, lines 30-46).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the scheme of Cheung in the method of Koppelmans in order to

Art Unit: 2623

improve the quality of the images . Doing so would reduce the blocking effect and errors in the output image so that the quality of the method is improved.

As to claims 33-35, 37 and 73 Koppelmans does not explicitly mention the features of editing, audio, electromagnetic, JPEG.

However, the examiner takes Official Notice that these features are notoriously well known in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include these features in the method of Cheung and Koppelmans in order to improve the quality of the images.

As to claims 74-75, Koppelmans discloses a method for digitally processing transform data in the real domain representing a phenomenon, the method comprising:

performing an inverse transform of said transform data to the real domain forming high-precision numbers (Fig. 1 element 10);

performing a forward transform of the integers forming forward transformed data (Fig. 1 element 31).

Koppelmans does not explicitly mention converting the high-precision numbers to integers which include out of range data.

Cheung, in an analogous environment, discloses the rounding and clipping after IDCT. (col. 10, lines 30-46).

Art Unit: 2623

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the scheme of Cheung in the method of Koppelmans in order to improve the quality of the images. Doing so would reduce the blocking effect and errors in the output image so that the quality of the method is improved.

As to claims 75 and 77, Cheung further discloses manipulating the integers to produce an effect and clipping the integers to an allowed range forming converted data. (Fig. 1).

As to claim 76, the discussion is addressed with regard to claim 28.

As to claims 79-83, the claim 79-83 are the corresponding program storage device claims to claim 74-77. The discussions are addressed with regard to claims 74-77.

10. Claims 43, and 52-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koppelmans in view of US 6151361 to Perlman.

As to claim 43, Koppelmans does not mention only subset of quantization data produced different transformed data.

Perlman, in an analogous environment, discloses the feature (Fig. 2 note that after limiters 209, 210, and 216, only subset contest data formed transformation data).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the scheme of Perlman in the method of Koppelmans in order to improve the quality of the images. Doing so would reduce the degradation effect and errors in the output image so that the quality of the method is improved.

Art Unit: 2623

As to claims 52-54, Perlman further discloses a system as recited in claim 41, wherein the contest data forms an other level of transform-coded data and further comprising: another inverse quantizer, another inverse transformer, another manipulator, another forward transformer, and another quantizer to perform together a similar function on the other level of transform-coded data as performed on the first level transform-coded data (Fig. 1), wherein the effect produced by the first manipulator is a different type of effect from that produced by the other manipulator (Fig. 1 element 106 and 112, col. 3 line 61-col. 4, line 30) and wherein the functions of the first inverse quantizer, first inverse transformer, first forward transformer, and first quantizer, and the respective functions of said another inverse quantizer, another inverse transformer, another forward transformer, and another quantizer are each performed by a same module (Fig. 1).

An analogous argument is addressed with regard to claim 43.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6064635 to Iwamura and US 6134650 to Beck. discloses methods for image compressing.

Art Unit: 2623

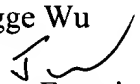
Contact Information

13. Any inquiry concerning this communication or earlier communications should be directed to Jingge Wu whose telephone number is (703) 308-9588. He can normally be reached Monday through Thursday from 8:00 am to 5:30 pm. The examiner can be also reached on second alternate Fridays.

Any inquiry of a general nature or relating to the status of this application should be directed to TC customer service whose telephone number is (703) 305-4700.


If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Amelia Au, can be reached at (703) 308-6604.

The Working Group Fax number is (703) 308-5397.

Jingge Wu

Patent Examiner

Art Unit 2723

February 25, 2001


Jon Chang
Primary Examiner